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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,136	07/28/2006	Yoshiaki Kumamoto	280999US0PCT	5996
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
HELLING, KAITLYN ELIZABETH				
ART UNIT		PAPER NUMBER		
3739				
NOTIFICATION DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/556,136

**Applicant(s)**

KUMAMOTO ET AL.

**Examiner**

KAITLYN E. HELLING

**Art Unit**

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 September 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-10, 12-16 and 18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5, 7-10, 12-16 and 18 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 24 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 09/24/2008  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Applicant is advised that should claim 2 be found allowable, claim 7 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 2, 4, 5, 7-10 and 12-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application Publication No. 01-201253 to Yahara et al. (Yahara) which for the sake of clarity, reference will be made to the English language translation supplied with this Office Action in view of U.S. 5,084,986 to Usui (Usui).

Regarding claim 1, Yahara teaches a warming article having a heat generating main body comprising a heat generating element (Fig. 1 and Claims) configured to generate water vapor (inherent in that there is water disposed in the main body and sufficient heating as taught on pg. 10 to cause vaporization) an air permeable holder (2, Fig. 1 and Pg. 8) including an air permeable layer and an air impermeable layer (Pg. 8) which are disposed on opposite sides of the heat generating element (Pg. 8), the heat generating main body expandable by water vapor generated with the heat generation of

the heat generating element (Claims and Industrial Field of Application). However, Yahara does not teach a receiving part configured to receive a part of the body which is provided on the air permeable side of the holder. Usui teaches a disposable warmer holder (title) which teaches a lower base member and an upper closure or cover (Fig. 1) which are of varying permeability to change the heating value provided (abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Yahara to have included a holder for receiving a body part that is provided on the air permeable layer to allow the warming article to receive and warm a body portion as taught by Usui (Col. 3, lines 20-30 and 39-58).

Regarding claim 2, Yahara in view of Usui teaches the article of claim 1, but not the warming article generating 1.0 to 100 mg/(cm<sup>2</sup>x10 min.) of water vapor. However, the warming article by Yahara is capable of producing water vapor in this range as the amount of water vapor produced is a function of material choice and the concentration of various components of the pulp mixture disclosed. It would be a matter of routine experimentation and design choice to produce a warming article as taught by Yahara which has a water vapor production within the claimed range. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have made a warming article that is capable of generating the desired water vapor as a matter of course in optimizing the invention (see MPEP 2144).

Regarding claim 7, Yahara teaches a warming article having a heat generating main body comprising a heat generating element (Fig. 1 and Claims) configured to generate water vapor (inherent in that there is water disposed in the main body and

sufficient heating as taught on pg. 10 to cause vaporization) an air permeable holder (2, Fig. 1 and Pg. 8) including an air permeable layer and an air impermeable layer (Pg. 8) which are disposed on opposite sides of the heat generating element (Pg. 8), the heat generating main body expandable by water vapor generated with the heat generation of the heat generating element (Claims and Industrial Field of Application). However, Yahara does not teach a receiving part configured to receive a part of the body which is provided on the air permeable side of the holder. Usui teaches a disposable warmer holder (title) which teaches a lower base member and an upper closure or cover (Fig. 1) which are of varying permeability to change the heating value provided (abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Yahara to have included a holder for receiving a body part that is provided on the air permeable layer to allow the warming article to receive and warm a body portion as taught by Usui (Col. 3, lines 20-30 and 39-58).

However neither Yahara nor Usui teaches the warming article generating 1.0 to 100 mg/(cm<sup>2</sup>x10 min.) of water vapor. However, the warming article by Yahara is capable of producing water vapor in this range as the amount of water vapor produced is a function of material choice and the concentration of various components of the pulp mixture disclosed. It would be a matter of routine experimentation and design choice to produce a warming article as taught by Yahara which has a water vapor production within the claimed range. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have made a warming article that is capable

of generating the desired water vapor as a matter of course in optimizing the invention (see MPEP 2144).

Regarding claims 4 and 9, Yahara in view of Usui teaches the article of claims 1 and 7 above, with Yahara teaching the further limitation of the method of producing a warming article comprising a heat generating element prepared by papermaking and containing an oxidizable metal, a moisture-retaining agent, a fibrous material, and water (Claims, Industrial Field of Application and Pgs. 4 and 6).

Regarding claim 8, Yahara in view of Usui teaches the article of claim 7, with Yahara teaching the further limitation of the holder having an air permeability of 10000 sec/100 ml or less (Pg. 11).

Regarding claims 12-14, Yahara teaches a heat generating, shaped article prepared by three-dimensionally shaping a molded sheet, that method comprising an oxidizable metal, a moisture-retaining agent and a fibrous materials (Claims and Industrial Field of Application) with the molded sheet molded by papermaking (Claims and Pg. 4), disposed between an air permeable and an air impermeable sheet (Fig. 1 and Pg. 8) and having a maximum stress of 0.3 to 5 MPa and a breaking elongation of 2.0 to 10% and a maximum stress of 0.5 to 15 MPa and a breaking elongation of 0.8 to 5% in its dried state (The MPa and breaking elongation are measured properties which the Office has no way of measuring. Therefore the burden rests on applicant to provide if proof the molded sheet of Yahara does not have these properties and the claimed properties render the claimed invention patentably distinct from that taught by Yahara). In the event that Yahara does not teach such properties, it would have been an obvious

matter of design choice among readily available materials to one having ordinary skill in the art at the time of the invention to have used a fibrous material having the claimed properties because no unique structure is disclosed. Therefore, all claimed materials are considered to have similar properties to similar materials known in the art.

Regarding claims 5, 10, 15 and 16 Yahara in view of Usui teaches the article of claims 4, 9 and 12, as well as Yahara teaching the molded sheet containing at least 50% by weight of components other than the fibrous material (Pg. 6), but not the fibrous material having a CSF of 600ml or less (This is a property of pulp drainage and the Office has no way of measuring the CSF of the pulp used in Yahara. The burden rests on applicant to provide proof if the fibrous material disclosed in Yahara does not have this property and the claimed property renders the claimed invention patentably distinct from that taught by Yahara). In the event that the fibrous material taught by Yahara does not have a CSF of 600 ml or less, it would have been obvious to one having ordinary skill in the art at the time of the invention to have used such a fibrous material as a matter of design choice as such properties are easily obtainable in pulp minerals as taught by Yahara.

Regarding claim 18, Yahara in view of Usui teaches the article of claim 12, with Yahara teaching the further limitation of an electrolyte incorporated into the heat generating shaped article (Claims and Industrial Field of Application).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Application Publication No. 01-201253 to Yahara et al. U.S. 5,084,986 to Usui (Usui) as

applied to claim1 above, and further in view of Japanese Patent Application Publication No. 2002-078728 to Toru et al. (Toru).

Yahara in view of Usui teach the article of claim 1, but not the moisture or water permeability within the range of 1.5 to 10 kg/(m<sup>2</sup>x24 hr). Toru teaches a warming article with air permeability that has a moisture permeability within the range of 1.5 to 10 kg/(m<sup>2</sup>x24 hr). It would have been obvious to one having ordinary skill in the art at the time of the invention to have further modified Yahara and Usui with the moisture/water vapor permeability of Toru as Toru teaches that steam generation in a warming article to be applied to the skin is advantageous (Claims).

***Response to Arguments***

5. Applicant's arguments, see Remarks page 7, filed July 17, 2008, with respect to the rejection(s) of claim(s) 6 and 11 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yahara and Usui as described above.

6. With respect to applicant's argument that Yahara does not suggest locations for the air permeable and air impermeable layers, the examiner disagrees. Yahara clearly states on page 8 that there is a porous and non-porous film applied to opposite sides of the warming article and thus suggests a location for the layers. Whether the layers provide a moisturizing function is not claimed and is similarly functional language that would not patentably define the claimed material.



7. With respect to applicant's argument that Yahara is not three-dimensionally shaped. Yahara is inherently three-dimensionally shaped as it is shaped by the same method of papermaking as the claimed invention.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 4,736,088 to Bart teaches a therapeutic heating pad and muff structure and U.S. 5,425,975 to Koiso et al. teaches a sheet-shaped heat-generating body with air permeable and impermeable layers as well as a water vapor permeability rate.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAITLYN E. HELLING whose telephone number is (571)270-5845. The examiner can normally be reached on Monday - Friday 7:30 a.m. to 5:00 p.m. EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571)272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 3739

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KAITLYN E HELLING/  
Examiner, Art Unit 3739

/Roy D. Gibson/  
Primary Examiner, Art Unit 3739